

GX5



GX5 LFP120



GX5 LFP160

PUMP MODEL	DIAPHRAGMS	MAX FLOW (GPM)	MAX GPA ON 40' @ 5 MPH	MAX GPA ON 60' @ 5 MPH
GX5 LFP80	3	18	45	30
GX5 LFP120	3	28	70	47
GX5 LFP160	4	35	87	58
GX5 D250	6	55	135	90

S/N STICKER



NOTE: This is only a guide! Please consult your OEM dealer for detailed instructions or troubleshooting!



AGXCEL MAGNETIC FLOWMETER OPTION

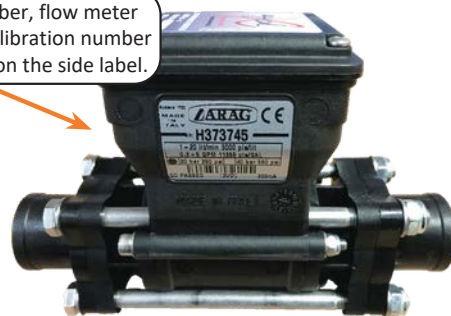
(Read Instructions Completely before Beginning Installation)

AGXCEL ORION 2+ FLOWMETERS

The AgXcel Mag Flowmeter is a magnetic flowmeter, also known as an electromagnetic flowmeter. A magnetic field is applied to the metering tube, which results in a potential difference proportional to the flow velocity perpendicular to the flux lines. The physical principle at work is electromagnetic induction. The Mag Meter is superior to other flowmeters since there are no moving parts to replace or maintain when dirty or fertilizer with particles is present. Also given that the Mag Meter detects the flow of ions in the liquid, it can therefore accommodate for viscosity or liquid density changes. Given the superior features of the Magnetic Flowmeter, a quick catch test is always recommended to ensure precision application.

GX5

Serial number, flow meter range and calibration number are all listed on the side label.



The new style Magnetic Flow Meters have a black body casing with an integrated AMP Super seal connector.



When using a magnetic flow meter one of the harnesses below must be used for the OEM controller to be able to calculate the flow. See chart below.

Orion 2+ Magnetic Flowmeters:

- 0.053 - 5.3 GPM.....11355
- 0.53 - 53 GPM.....1135
- 2.11 - 211 GPM.....284

A controller that requires a DB8 harness is due to the fact that when inputting the flow meter cal number, some controllers can only input 4 digits. A DB8 harness will take the pulses per gallon and divide it by 8. Giving you a 4 digit cal number.

NOTE: To get the cal numbers for Micro-Trak controllers the formula is - Divide by 8, multiply by 2.

STANDARD ADAPTER HARNESS.
P/N - 53671



DIVIDE BY 8 HARNESS
P/N - 38228

AGXCEL TURBINE FLOW METERS

FM750 Reg
Micro-Trak Cal Number - 145 (SprayMate, Auto-X)
Pulses Per Gallon - 72.50 (JD, AGL, Trimble)
Pulses Per 10 Gallon - 725 (Raven)

FM750 LF
Micro-Trak Cal Number - 466 (Spraymate, Auto-X)
Pulses Per Gallon - 233 (JD, AGL, Trimble)
Pulses Per 10 Gallon - 2330 (Raven)



AGXCEL ORION 3 FLOWMETERS

NEW

GXORION3

The Orion 3 is an advanced electromagnetic flowmeter designed for precise management of liquid distribution systems on seeders. It supports multiple flowmeter connections via a CAN-Bus port, facilitating seamless integration into complex agricultural setups. This device ensures accurate monitoring and control of liquid flow, enhancing efficiency and productivity.

Diagnostic LED allows for quick identification of flow and signal issues



See parts catalog layout of kit fittings with options for inlet and outlet. Only the DN17 will need a T3 fitting for direct adaption.



	OFF	The flowmeter is not powered.
	GREEN FLASHER	The flowmeter is waiting to acquire an address on the CAN line to which it is connected.
	GREEN STEADY ON	Presence of STILL liquid inside the flowmeter.
	BLUE STEADY ON	The flowmeter is reading the passage of the liquid inside.
	VIOLET STEADY ON	No liquid has been detected inside the flowmeter.
	WHITE STEADY ON	Cleaning of the reading electrodes in progress.
	RED FLASHER	The error codes are indicated through blinks, which are described in the table on page 10.
	RED STEADY ON	SEVERE ERROR: contact a service center.
	ORANGE BLINKING	Device in bootloader mode for firmware upgrade.
	ORANGE STEADY ON	Device in bootloader mode.

The status indicates the operating status of the device. At startup, during the first 5 seconds, Orion 3 displays its configuration regardless of the presence of an alarm (Green LED Flashing). Each type of blinking (flashing) corresponds to signal as indicated in the table above.

Serial number, flow meter range (DN#) and calibration number are all listed on the side label.



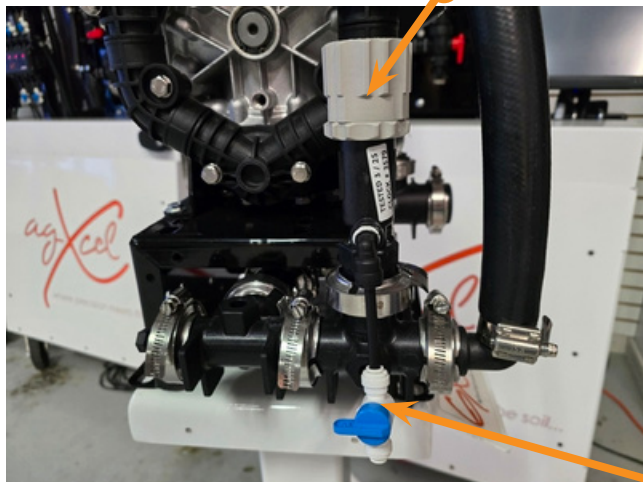
GXORION3 FLOW CHART									
FLOW RANGE (GPM)	PULSES PER GALLON	JOHN DEERE GS2/GS3 2K LRCM		AG LEADER L1		TRIMBLE		AUTOX SPRAYMATE PLUS	
		DB8 CABLE	CAL#	DB8 CABLE	CAL#	DB8 CABLE	CAL#	DB8 CABLE	CAL#
.04 - 1.6 (DN3)	75708	YES	9464	YES	9464	NO	75708	YES	9464
.08 - 3.17 (DN4)	37854		4731		4731		37854		4731
.26 - 10.5 (DN7)	11356		1419	11356	11356		22710		
.52 - 21 (DN10)	4542	NO	4542	4542	4542		NO	9084	
1.45 - 58 (DN)	2063		2063	2063	2063			4126	
FLOW RANGE (GPM)	PULSES PER GALLON	RAVEN RCM		AG LEADER L2		MUELLER		GX8	
		DB8 CABLE	CAL#	DB8 CABLE	CAL#	DB8 CABLE	CAL#	DB8 CABLE	CAL#
.04 - 1.6 (DN3)	75708	YES	9464	YES	9464	NO	75708	YES	9464
.08 - 3.17 (DN4)	37854		4731		4731		37854		4731
.26 - 10.5 (DN7)	11356		1419	11356	11356		22710		
.52 - 21 (DN10)	4542	NO	4542	4542	4542		NO	9084	
1.45 - 58 (DN17)	2063		2063	2063	2063			4126	
WHEN USING A ORION3 FLOW METER ONE OF THE HARNESSES BELOW MUST BE USED FOR THE OEM CONTROLLER TO BE ABLE TO CALCULATE FLOW. SEE CHART ABOVE									
GXORION3 ADAPTER HARNESS PN#13135					GXORION3 DIVIDE BY 8 (DB8) PN#13134				

GX5 RE-CIRCULATION FEATURE

(Read Instructions Completely before Beginning Installation)

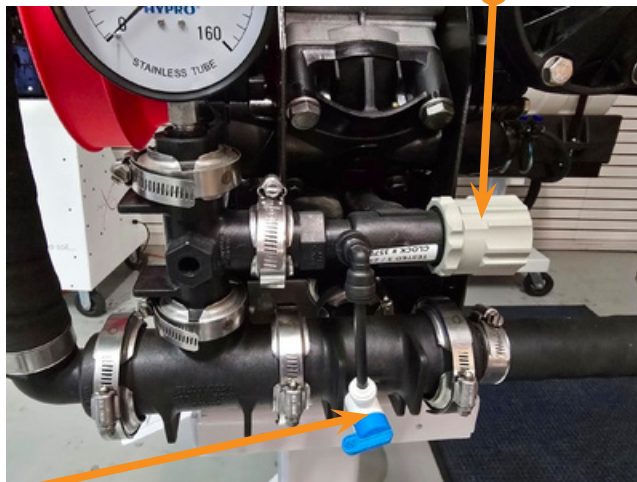
LFP 80 & LFP 120

Re-circulation Regulation valve



LFP 160 & D250

Re-circulation Regulation valve



Bleeder Valve - A *bleeder valve* is used when the GX5 has air trapped in the system which is VERY rare. Open the valve to allow the air to release and then ensure that it is closed when GX5 is in operational mode.

APPLICATIONS

- Recirculation flow is required for product agitation.
- IF a low flow rate is required, that would require pump to run less than 10-20% of maximum capacity. This kit will allow the pump to turn faster, while only applying a low rate of product. This makes the pump performance more stable under these circumstances. Make sure the flowmeter minimum flow is capable of metering the flow rate you wish to apply to the ground.

HOW IT WORKS

The recirculation valve diverts some pump flow before the flowmeter. The application rate is still measured by the flow- meter and everything that passes through the flowmeter is applied to the ground. Adjust the regulation valve to set the required recirculation.

USE OF THIS KIT LOWERS THE MAXIMUM RATE THAT CAN BE APPLIED

GX5 ACCESSORY - RECIRCULATION KIT - LFP160 & D250

Same function as above, slightly different attachment to pump.(See sample above)

AGXCEL GXTANKTOPUMPKIT

(Read Instructions Completely before Beginning Installation)

PN# 53845 (GX5 TANK TO PUMP KIT)

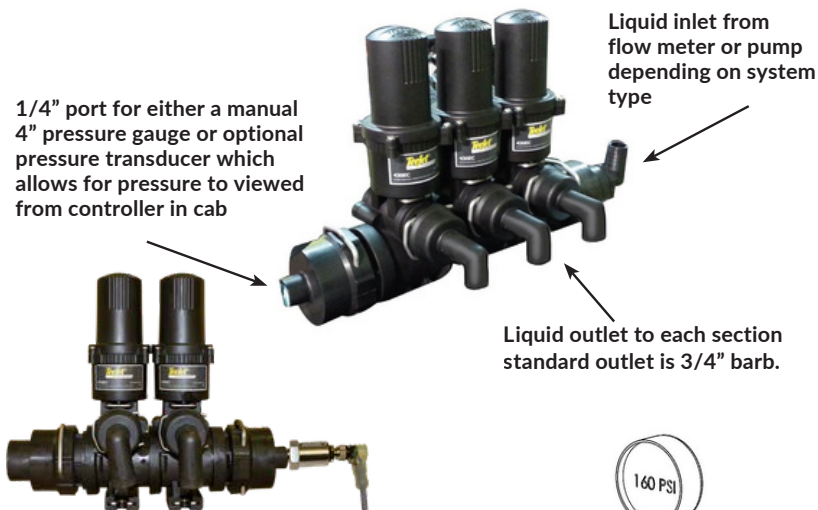


GX5 TANK TO PUMP KIT PN# 53845

PN#	ITEM	QTY
51381	BARB	2
38269	GASKET	3
51766	STRAINER 30 MESH	1
51383	90-BARB	1
38267	CLAMP	3

SECTION VALVES - HOW THEY WORK

Section valves can be assembled into groups with a common inlet to control flow to each section. Common assemblies use up to 5-6 valves, however, more can be used where practical. Many alternate fittings can be used to accommodate different hose sizes and configurations. The valves have a 3 pin weather pack electrical connector. This has a power, ground, and switched wire. The power measured to ground should have 12 volts when the controller is on. The switched wire will have 12 volts to turn the valve on, and 0 volts to turn the valve off.



PRESSURE TRANSDUCER KIT
PN# 53491

**OPTIONAL PRESSURE TRANSDUCER KIT
(PN#53491) AVAILABLE FOR PURCHASE
IN PLACE OF THE GAUGE **



AgXcel has many different pressure gauge mounts and most all AgXcel systems have a visual pressure gauge mounted on the GX5 system

160 PSI - HYDRAULIC PUMP
GAUGE KIT PN# 53770

PLUMBING	
17614	3/8 BLK HOSE
17649	SST #6 CLAMPS
37619	1/2 BLK HOSE
308	3/4 BLK HOSE (PRECUT IN 50FT)
19646	SST #12 CLAMPS

MISC HARNESS	
53594	6 SECTION BOOM HARNESS
53800	12 SECTION BOOM HARNESS
20031	TRANSDUCER/SECTION EXTENSION (SOLD BY THE FT)

GX5 HYDRAULIC VALVE AND MOTOR

(Read Instructions Completely before Beginning Installation)

4.9 CID MOTOR WITH PWM VALVE - HOW IT WORKS:

The AgXcel proprietary PWM valve has a solenoid that receives a variable signal from the OEM liquid rate controller. This signal is used to open the pressure compensating valve to allow the correct amount of hydraulic fluid through the valve to rotate the diaphragm pump appropriately to apply the correct GPM. When 0 volts are present then the valve closes and the motor stops.

With the bypass closed only the oil that passes through the PWM valve itself will flow to and from the valve. When the PWM valve is closed, no oil will flow. With the bypass open, the total oil flow from the tractor will always flow through the valve. The PWM valve will divert the oil it needs to rotate the motor at the proper speed.

This valve can be used with Power Beyond hydraulics instead of using a standard tractor hydraulic valve. Uncap the LS port and plumb this back to the tractor load sense connector. The LS port has an internal check valve necessary in power beyond installations.

Port Sizes on valve:

Hydraulic Hose Fittings:

Motor Mounting Hardware:

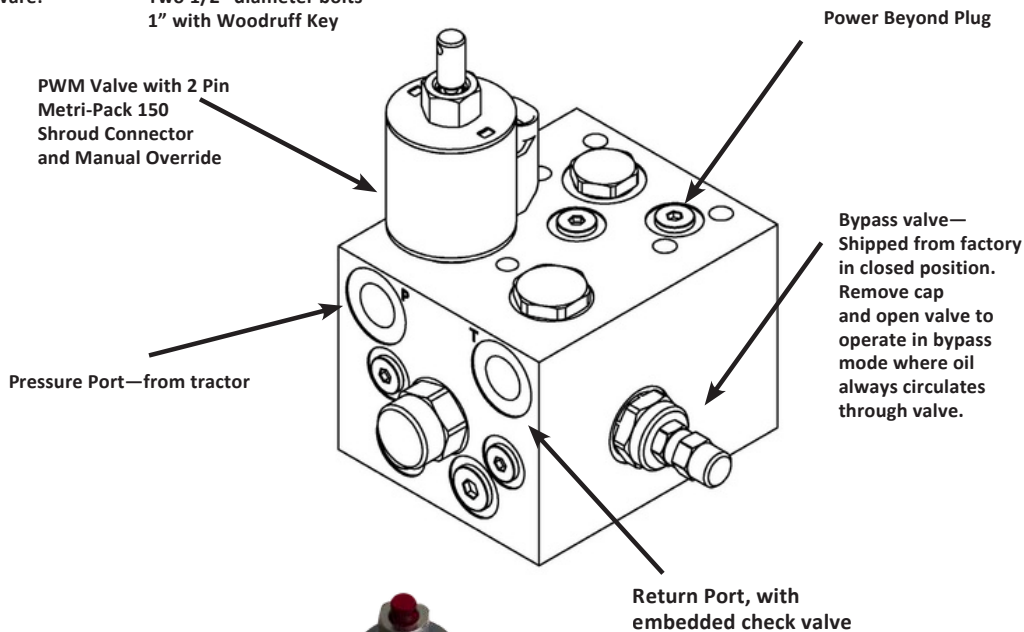
Shaft Size:

-8 SAE O-Ring (LS is -6 SAE O-Ring)

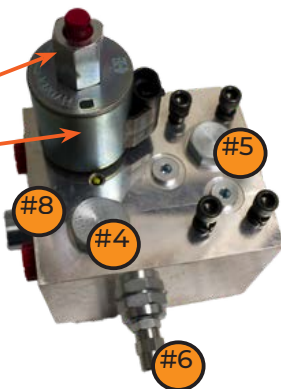
-8 SAE O-Ring

Two 1/2" diameter bolts

1" with Woodruff Key



PN#	DESCRIPTION
55493	GX5MANUALOVERRIDEVALVE
55165	GX5PWMSOLENOID
54472	160 PSI HYD CARTRIDGE
54490	CARTRIDGE SEAL KIT FOR GX5 PWM #8
54488	CARTRIDGE SEAL KIT FOR GX5 PWM #5
54487	CARTRIDGE SEAL KIT FOR GX5 PWM #4
54489	CARTRIDGE SEAL KIT FOR GX5 PWM #6
55095	MOTOR SEAL KIT

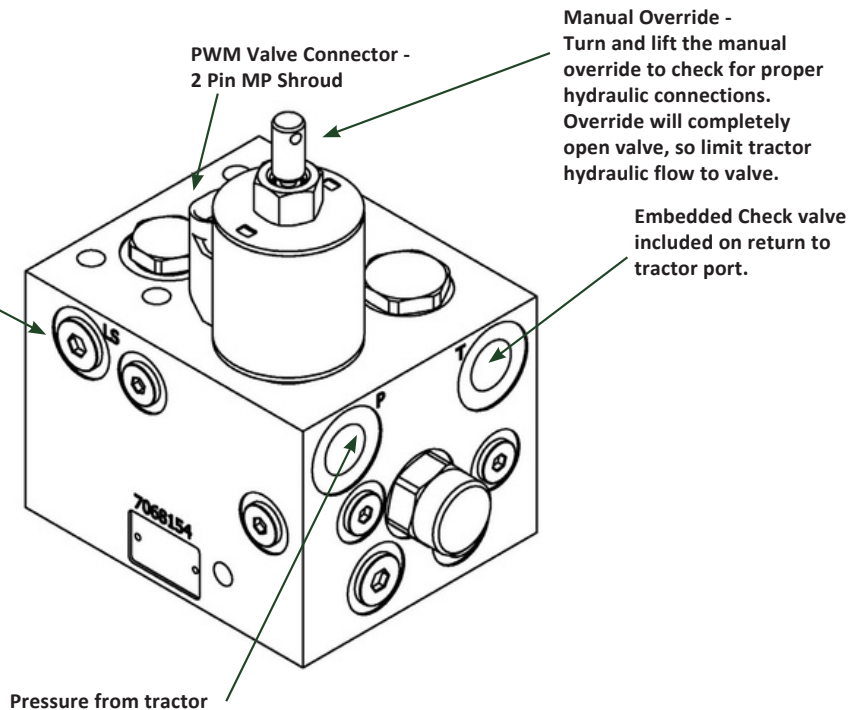


GX5 HYDRAULIC CONNECTIONS

(Read Instructions Completely before Beginning Installation)

HYDRAULIC CONNECTIONS

Load Sense Port —For power beyond hydraulic use only.



PUMP ROTATION CHECK VALVE

A check valve is included on the outlet port of the hydraulic valve. This prevents the pump from running in the wrong direction. If ran in the wrong direction, liquid will be pumped, however the hydraulic valve will not be able to control the flow. The check valve can be identified by the Part Number 1108R stamped on it and a flow direction arrow.

HOW IT WORKS WITH POWER BEYOND HYDRAULICS

This valve is designed to work with power beyond hydraulics. This configuration will not require a standard tractor remote hydraulic valve. First, remove the load sense plug and install a #6 male boss x #6 JIC adapter fitting. Then run a 3/8" or 1/4" hydraulic hose back to the tractor. This hose will connect to the load sense port on the tractor. **The bypass valve must be closed to use power beyond hydraulics.** The load sense line will signal the tractor hydraulic system to supply the flow needed by the pump to meet your application rate. The AgXcel valve has an internal load sense check valve, which is required for power beyond hydraulics.

- **Pressure compensated tractor hook-up**

The P port on the manifold connects to pressure on the power beyond
The T port on the manifold connects to the return on the power beyond
Fully close NV on manifold

- **Pressure flow compensated tractor hook-up**

The P port on the manifold connects to pressure on the power beyond
The T port on the manifold connects to the return on the power beyond
The LS port on the manifold connects to the load sense on the power beyond
The LS port on the power beyond may need a bleed off orifice (check with tractor dealer for details)
Fully close NV on manifold

- **Open center tractor hook-up**

The P port on the manifold connects to pressure on the power beyond
The T port on the manifold connects to the return on the power beyond
Fully open NV on manifold



GX5 HYDRAULIC CONNECTIONS

(Read Instructions Completely before Beginning Installation)

HYDRAULIC HOSE

The pump inlet and outlet hydraulic hose must be purchased by the end user.
Recommends using 1/2" hydraulic hose with #8 swivel fittings.

BEST OPTION - DEDICATED CIRCUIT (PREFERRED METHOD)

If you have a tractor remote available, attach the tractor remote valve directly to the pressure and return ports. DO NOT try to avoid this method simply to save another set of hydraulic hoses running to the tractor. Operating the hydraulic pump system on it's own circuit is the simplest for installation and operation. It guarantees the system won't negatively affect any other hydraulic components on your equipment.

ALTERNATE OPTION - PARALLEL BEFORE CCS BLOWER FAN

If you do not have a tractor remote valve available, this may be your best method. You can plumb AgXcel's GX5 hydraulic pump by "T"ing off the pressure line and return line before the CCS blower fan. If using this method, the PWM valve will remain closed (default position). AgXcel's GX5 LFP series will only use very minimal amount of hydraulic oil that will not affect the CCS fan (Averaging 2-4 GPM, 10 GPM oil necessary for maximum flow). AgXcel DOES NOT recommend plumbing the hydraulic pump system in series with a vacuum fan. The vacuum fan uses just a few GPM of oil. Also, problems will be caused by excessive pressure at the vacuum fan motor.

Example of hydraulic plumbing "T" style with CCS fans



TWO HYDRAULIC PUMP SYSTEMS

The preferred method is to plumb the two pumps in parallel. DO NOT plumb two pumps after the CCS fan. Excessive pressures may damage the CCS fan motor. If you connect the two pumps in series, then run the pressure line from the tractor to first pump inlet. Plumb from the outlet of Pump 1 to the inlet of Pump 2, then from Pump 2 outlet back to the tractor. Open the bypass needle valve on both pumps so each valve controls motor speed independently. Run the flow setting procedure on the next page to minimize the hydraulic flow based on the pump that requires more hydraulic motor flow.



QUICK REFERENCE GX5 KITS DESCRIPTION

(Read Instructions Completely before Beginning Installation)



DIAPHRAGM KITS	PN#	DESCRIPTION
	55564	LFP45/BP45 BLUE FLEX DIAPHRAGM KIT
	55568	LFP 45 VITON DIAPHRAGM KIT
	55570	LFP/BP 80 BLUE FLEX DIAPHRAGM KIT
	55569	LFP 80 VITON DIAPHRAGM KIT
	37703	D70 BLUE FLEX DIAPHRAGM KIT
	37708	D115 BLUE FLEX DIAPHRAGM KIT
	55572	LFP120 BLUE FLEX DIAPHRAGM KIT
	55574	LFP120 VITON DIAPHRAGM KIT
	37730	D160 BLUE FLEX DIAPHRAGM KIT
	70000	LFP160 BLUE FLEX DIAPHRAGM KIT
	37732	D250 BLUE FLEX DIAPHRAGM KIT



TIP: If unsure of pump size, look for metal label on either the oil reservoir or on/or near the base of pump.

Do Not use the GX5 diaphragm pump for applying two-step curing compounds, asphalt or asphalt sealer, or other products that can harden inside the pump.

Do Not use the GX5 diaphragm pump to pump flammable liquids, including gasoline or diesel fuel.

Pumping bleach with the GX5 diaphragm pump will void the manufacturer warranty.

Do Not allow this pump to freeze with water inside the pump.

Failure to follow these warnings will result in personal injury, pump damage and void the warranty.



O'RING KITS	PN#	DESCRIPTION
	37735	LFP 45 O'RING KIT
	37761	LFP 80 O'RING KIT
	29935	D70 O'RING KIT
	29922	D115 O'RING KIT
	34739	LFP120 O'RING KIT
	29905	D160 O'RING KIT
	56155	LFP160 O'RING KIT
	29903	D250 O'RING KIT



VALVE KITS	PN#	DESCRIPTION
	55566	LFP 45 VALVE KIT
	29934	D70 VALVE KIT
	29936	D115 VALVE KIT
	55575	LFP80/LFP120 VALVE KIT
	29937	D160 VALVE KIT
	56154	LFP160 VALVE KIT
	29930	D250 VALVE KIT

Diaphragm Pump Oil

- Advanced Lubrication Technology
- BlueFlex Diaphragm compatible
- SAE 30 Non-Detergent Oil

57489 OIL QUART (32oz)

Specifically formulated for GX5 Diaphragm pumps.

AgXcel

CALCULATOR

Our easy to use, orifice and metering tube calculator is available FREE now on the App Store.





Limited Warranty on AgXcel Agricultural Pumps & Accessories

AgXcel agricultural products are warranted to be free of defects in material and workmanship under normal use for the time periods listed below, with proof of purchase.

- Pumps: one (1) year to the original purchaser from the date of manufacture, or one (1) year of use. This limited warranty will not exceed two (2) years, in any event.
- Accessories: ninety (90) days of use.

This limited warranty covers manufacturing defects or workmanship; that may develop under normal use and service in a manner up to the directions and usage recommended by the manufacturer.

Warranty does not apply to misuse or when pump or accessory is altered or used in excess of recommended speeds, pressures, temperatures, or handling fluids not suitable for pump or accessory material construction. Warranty does not apply to normal wear (such as but not limited to: seals/packings, valves, plungers and sealing o-rings), freight damage, freezing damage or damage caused by parts or accessories not supplied by AgXcel. All warranty considerations are governed by AgXcel's written return policy.

Liability of manufacturer for warranty is limited to repair or replacement of parts only at the option of the manufacturer when such products are found to be of original defect or workmanship at the time it was shipped from factory. This warranty is in lieu of all other warranties, expressed or implied, including any warranty of merchantability and of any and all other obligations or liabilities on the part of the manufacturers or equipment.

AgXcel's obligation under this limited warranty policy is limited to the repair or replacement of the product. All returns will be tested per AgXcel's factory criteria. Products found not defective (under the terms of this limited warranty) are subject to charges paid by the returnee for the testing and packaging of "tested good" non-warranty returns. No credit or labor allowances will be given for products returned as defective. Warranty replacement will be shipped on a freight allowed basis. AgXcel reserves the right to choose the method of transportation.

This limited warranty is in lieu of all other warranties, expressed or implied, and no other person is authorized to give any other warranty or assume obligation or liability on AgXcel's behalf. AgXcel shall not be liable for any labor, damage or other expense, nor shall AgXcel be liable for any indirect, incidental or consequential damages of any kind incurred by the reason of the use or sale of any defective product. This limited warranty covers agricultural products distributed within the United States of America. Other world market areas should consult with the actual distributor for any deviation from this document.



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